ESPRIT 728/738

LISTED

Installation Manual

VERSION 2.20

PARADOX
SECURITY SYSTEMS

IM728-738 960716-0000

Requirements and guidelines for U.L. INSTALLATIONS

UL listed in accordance with standard **UL1023** (Household Burglar - Alarm System Units), standard **UL985** (Household Fire Warning Units) and **UL1635** (Digital Alarm Communicator System Units).

UL has only evaluated the 718, 728L, 728, 728 EXPRESS, 738, 738 EXPRESS and 748 for compatibility with the Ademco model 685, FBI model CP220FB, SUR-GUARD SG-MLR2-D6 and Silent Knight model 9000.

Some operational features are not permitted in UL installations. To respect the standards for household applications, the installer should follow these guidelines when configuring the system.

1. ALL components of the system should be UL listed for the intended application.

2. If the installation is a FIRE ALARM application, refer to NFPA Standard 74 for details on locating smoke detectors. There must be at least one UL-Listed Indoor Fire Alarm Warning Signaling Appliance.

3. For U.L. Burglar Applications:
   Maximum entry time = 45 seconds
   Maximum exit time = 60 seconds
   Minimum bell cutoff time = 4 minutes

4. Models 629, 633, 639, are not UL listed.

5. The upload/download software should not be used on UL listed systems.

Requirements and Guidelines for AUSTEL INSTALLATIONS

Austel-approved installations: use a transformer approved by the State Electricity commission, such as "Dyen" PA series 15VAC 22VA. With this transformer, do not exceed the following maximum currents: - maximum Auxiliary current (including keypads): 300mA
- maximum Bell current :600mA

Requirements and Guidelines for ULC INSTALLATIONS

When the system controls a fire alarm system, wiring method must correspond to section 32 of the Canadian Electrical Code.

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//// INTRODUCTION

Thank you for placing your trust in the ***Esprit 728*** and ***Esprit 738*** control panels. You've chosen sophisticated, user-friendly control panels designed to meet all of your technological, performance and security requirements.

We hope that the important features of the ***Esprit 728*** and ***Esprit 738***, which include a 120-event, PC-uploadable event buffer and high-speed pre-programmed communicator formats, will simplify your task of supplying quality security service to your customers.

ABOUT THIS MANUAL

This installation manual has been created to provide you with the information you will need to understand panel operation, features and functions. It expands on the directions found in the ***"Programming Guide"***. Even if you are familiar with other security control panels, we recommend that you read this manual at least once to familiarize yourself with panel features. Please refer to the index for a complete list of manual contents.

ABOUT P▲R▲DOX

We do our best to develop technologically-advanced products. If you have any comments or suggestions, or if you require additional technical assistance, please contact your local distributor. Every effort has been made to ensure that your distributor's staff has received complete training from Paradox Security Systems so that you receive prompt and effective service.

FEATURES

Reliability

The superior capabilities of the 728 and 738 are driven by cutting edge hardware. Use of the most powerful RISC processors on the market, with built-in “Analog to Digital” converters and SMD Technology, means these control panels require 30-40% less components than any previous generations.

Total Compatibility

All programming, comprehensive system features, and upload/download software of Esprit panels are identical. This total compatibility significantly reduces the time required to conduct training, programming and system upgrades. There’s just one set of procedures for all Esprit panels.

User-friendly Operation

The reduced number of steps required to program Esprit panels via a keypad speeds up installation. End-user access to most system functions calls for just one touch of the keypad. A “streamlined programming” feature further simplifies the programming process, by saving data automatically and leading the installer through the programming addresses without the need to enter them manually.

False Alarm Prevention

Important advances have been made in Esprit control panel technology which guarantee exceptional levels of false alarm protection. A full range of high tech features dramatically reduce the frequency of false alarms. These easy to use tools include “Intellizone” definition, “Auto Zone Shutdown”, “Beep On Exit Delay” and “20 Second Delay before Alarm Transmission”.

Flexible System Partitioning

Each control panel can be used to monitor two distinct security systems. Partitioning provides a practical and flexible solution to situations where combined systems are a necessity. User-friendly Esprit partitioning does it all with just one access code. Protected area zones can be defined as belonging to System “A”, System “B”, both systems (dual area), or given no system assignment (common area).

High-Speed Preprogrammed Communication

Esprit panels can slash set-up and reporting time by transmitting preprogrammed and high-speed communicator formats.

Event Buffer and “Real Time Clock”

Incorporation of a real time clock permits the creation of a 120 event, PC uploadable buffer with time and date. Two automatic arming options are made possible by the inclusion of the "real time" clock. Auto arming can be programmed to take place at a specific time, or following a set time period without any zone activity (auto arm and/or report only).

Programmable Outputs

Almost any control panel status situation may be used to activate the Esprit's programmable outputs. Once a panel status mode is selected for a PGM to follow, the polarity and duration of the output may also be programmed. 18 supplementary programmable outputs are available with the SRI18 module, which connects to the panel's serial output.

Esplod Upload/Download Software

Esplod upload/download software revolutionizes control panel supervision by offering powerful panel programming, modification, real-time monitoring and data management tools. It functions with most Hayes-compatible modems, requires only 45 seconds to transmit a full upload or download, and is extremely simple to learn and operate. The upload/download software is not permitted on UL installations.

Advanced Technology Zoning

Advanced Technology Zoning was developed to permit connection of 2 zones and a tamper on a single pair of wires, as well as providing wire fault recognition. ATZ simplifies the task of meeting the zone reguirements of any installation and, at the same time, reduces installation costs.

Alarm Relay (optional-738)

Single pole, double throw dry contacts rated at 5 amps that follow the local alarm (bell/siren) output.

SPECIFICATIONS
Inputs and Outputs:

Maximum Zones:	Varies according to control panel/keypad combination. **639/640 LCD keypads:** (See "Keypad Connections", page 8.) 728: **10** zones (4 onboard zones + 4 ATZ zones + 2 keypad zones) 738: **14** zones (6 onboard zones + 6 ATZ zones + 2 keypad zones) **616/626/633 LED keypads:** (See "Keypad Connections", page 8.) 728: **9** zones (4 onboard zones + 4 ATZ zones + 1 keypad zone) - using **1** keypad. 728: **10** zones (4 onboard zones + 4 ATZ zones + 2 keypad zones) - using **2** keypads. 738: **13** zones (6 onboard zones + 6 ATZ zones + 1 keypad zone) - using **1** keypad. 738: **14** zones (6 onboard zones + 6 ATZ zones + 2 keypad zones) - using **2** keypads.
Zone Configuration:	N.C. (no resistors), EOL (1 resistor), "Advanced Technology Zoning" and wire/tamper recognition using. 2 resistors per zone. (Zone configuration programmed at address **208)**
Battery Charger:	360mA with active Battery test.
Aux power:	400 mA, Fuseless electronic shutdown at 1A, Automatic restore
Bell Out:	1A, Fuseless electronic shutdown at 3A, Automatic restore
AC input:	16.5 Vac, 40VA, 50 - 60Hz
PGM outputs:	More than 1000 options to follow 2 operation modes: Timed (1 sec.-2 hrs.) or following predetermined condition. N.C. or N.O to ground, 50 mA Max. Can also be remote-controlled by PC using Esplod.

Event Buffer:

120 event buffer with time and date.

Operating Modes:

17 User codes (2 Master codes) 4 or 6 digit codes.
Partitioning to System "A", System "B", both systems (dual area), or no system assignment (common area).
Regular, "Stay" (at Home) arming, Force "Away" arming
Fast "One key Full Arm", "One key Stay Arm" and "One key Exit".
Key Switch Arm/Disarm ("stay" or "regular" mode).
PS1 bedside remote.
3 keypad-activated panic alarms.
Real Time Clock for "list of events", auto arming and test reports.
Auto arm on "time" or "no zone activity delay time".

Digital Communicator:

Compatible with most worldwide telecommunication standards.
Reporting formats:

Pulse: Ademco slow (10BPS), Silent Knight fast, Sescoa (20 BPS) Radionics, Radionics with parity (40 BPS), 1400Hz - 1800Hz (10 BPS)

DTMF: Contact ID, Ademco Express, “No handshake” DTMF format. (Pager)

True Dial tone detection and telephone line monitoring.
Fully up/downloadable with PC.
Regular, Split and Double reporting modes.
“Delay before alarm transmission” option.

Esploa d

Upload/download PC software.
Provides full up/download within 45 seconds.
Permits creation of unlimited number of account and panel default files.
Powerful "monitoring" mode supervises all panel activity.
"Scheduler" activates panel features at preprogrammed intervals.
"Batch" mode carries out tasks following panel call.

Accessory Modules:

SRI 18: 18 PGM outputs, ***708:*** Secondary Digital Dialer (UL listed)
708DV: DVACS communicator (Canada only), ***Esprint:*** Parallel printer interface (not UL listed).

Keypads:

616, 626, 629 and 633 (LED) keypads. 639 and 640 (LCD) keypads, PS1 bedside remote. (For UL systems use only 616, 626, 640 or PS1.)

Current Consumption:

(measured with battery connected, without AC and with 1KΩ resistor on bell and 1KΩ resistor on zones.)

738 control panel*:*	25mA DC	**633** LED keypad:	15mA DC Typical
728 control panel*:*	25mA DC		35mA DC Maximum
616/626 LED keypads:	15mA DC Typical	**PS1** bedside remote:	15mA DC Typical
	30mA DC Maximum		20mA DC Maximum
629 access control keypad:	30mA DC Typical	**SRI-18**:	50mA DC Typical
	55mA DC Maximum		
639/640 LCD keypads:	20mA DC Typical		
	45mA DC Maximum		

//// BASIC INSTALLATION

LOCATION AND MOUNTING

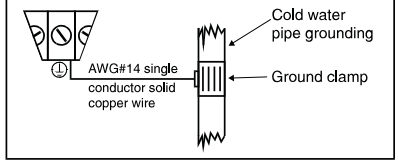
Remove the printed circuit board, mounting hardware and keypad from the packaging inside the panel box. **Press the four white nylon mounting studs into cabinet from the back before mounting the cabinet.** Before mounting circuit board on the back of the cabinet, pull all cables into cabinet and prepare them for connection.

Select a control panel installation site that is not easily accessible to intruders. Leave at least 2” around the panel box to permit adequate ventilation/heat dissipation. Installation location should be dry, close to an AC source, ground connection and a telephone line connection.

EARTH GROUND

The earth terminal should be connected to the cabinet and grounding rod as per local electrical codes.

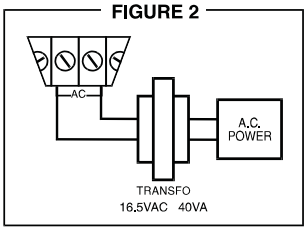
FIGURE 1



AC

Use a 16.5VAC (50-60 Hz) transformer with a minimum 40VA rating to provide sufficient AC power. Do not utilize any switch-controlled outlets to power the transformer. UL listed systems require K12 model T16V40 transformer, ULC listed systems require Frost model FTC 1637 transformer. **Warning: Do not connect transformer until all wiring is completed.**

FIGURE 2



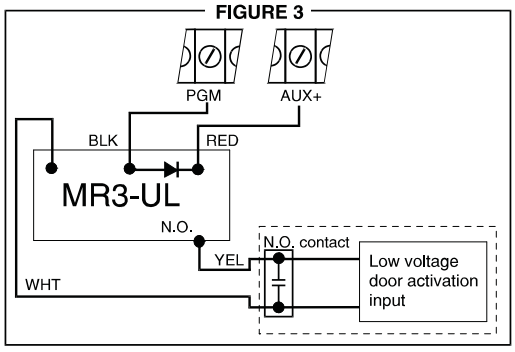
PROGRAMMABLE OUTPUTS

If programmable outputs are to be used, they should ideally be connected through external relays, as these outputs should not drive more than 50mA. A relay should be used in cases where more than 50mA is required. (UL tested for 30mA only.)

Example: To program PGM1 to open/close an automatic garage door when keys **[3]** and **[6]** are pressed at the same time:

Address **195**: **[6]** (1st digit)
Address **196**: **[5] [8]**
Address **198**: **[1] [1]**
Address **254**: **[10] [10] [1]**

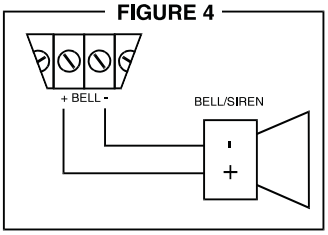
FIGURE 3



BELL/SIREN OUTPUT

Bells or other warning devices requiring a steady voltage output during alarms, are powered by the **Bell+/ Bell-** terminals. The bell output is microprocessor-controlled and will automatically shut down if current exceeds 3 amps. The processor will allow current to resume as soon as another alarm is triggered. The correct polarity connections should be made when hooking up sirens (speakers with built-in siren drivers). **"Bell+"** terminal is the connection for the positive lead. **"Bell-"** terminal is the connection for the negative lead. The bell output supplies 12V upon alarm. It can support two 20-watt or two 30-watt sirens. (Above 1A, battery supplies current.)

FIGURE 4



AUXILIARY POWER TERMINALS

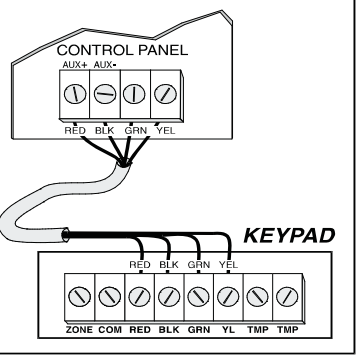
Motion detectors and any security devices requiring 12VDC voltage can be powered by the auxiliary power supply. A maximum of 400mA 12VDC is available 250mA 12VDC for 24hrs standby for UL/ULC installations is available from the AUX+ and AUX- terminals. For each **additional** keypad or PS1 module, the auxiliary supply must be reduced by the corresponding keypad current consumption value. (See "Current Consumption", page 6). The auxiliary supply is microprocessor-protected against current overload and automatically shuts down if current exceeds 1 amp. Auxiliary power will resume after battery test takes place (within 1 - 60 seconds).

KEYPAD CONNECTIONS

Panel/keypad connection:
The four keypad connections labeled "red", "black", "green" and "yellow" should be connected to the corresponding colour terminals on the control panel PC board.

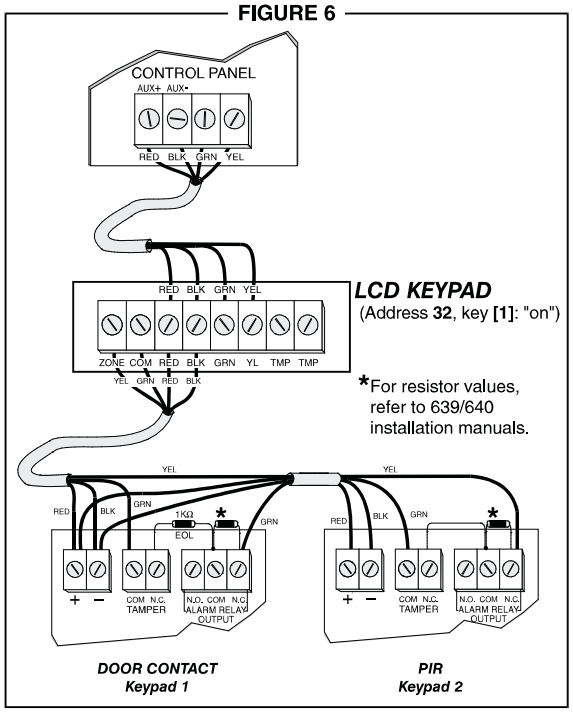
Keypad zone connection:
The two connections labeled "zone" and "com" are used to connect a zone to the keypad. Up to 5 keypads may be connected to the control panel but only two (2) keypad zones (Keypad 1 and Keypad 2) can be active at any one time. Examples of keypad zone connection possibilities (depending on type of keypad used) are shown below:

FIGURE 5



639/640 LCD keypads

FIGURE 6



728 (no ATZ):
Kpd 1 = Zone 5
Kpd 2 = Zone 6

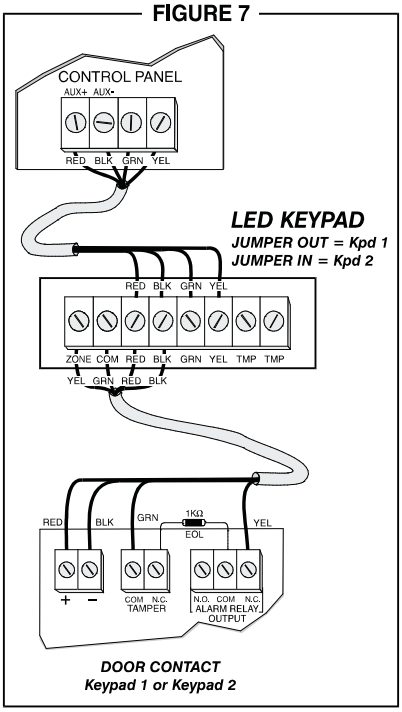
728 (with ATZ):
Kpd 1 = Zone 9
Kpd 2 = Zone 10

738 (no ATZ):
Kpd 1 = Zone 7
Kpd 2 = Zone 8

738 (with ATZ):
Kpd 1 = Zone 13
Kpd 2 = Zone 14

616/626/633 LED keypads

FIGURE 7



To disable the keypad zone (when keypad zone supervision is deactivated), you must connect a 1KΩ resistor across the two connections labeled “zone” and “com” on the keypad. (On the 616 keypad, connect the blue wire “zone” to the black wire “com” and remove the EOL jumper 2.)

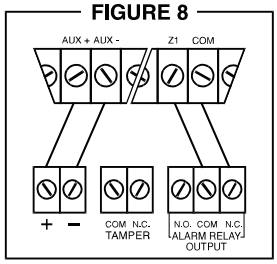
ZONE INPUT TERMINALS

Loop Configurations and Zone Connections

The system hardware will recognize the following conditions for each zone:

SINGLE ZONE connection without EOL resistor (N.C. contacts)
address **208,** key **[MEM] =** "on"
key **[10] =** "off" (default)
key **[11] =** "off" (default)
Note: Keypad zones always use a 1KΩ EOL resistor.

FIGURE 8



SINGLE ZONE connection with a 1KΩ EOL resistor (N.C. and N.O. contacts)

address **208,** key **[MEM] =** "off" (default)
key **[10] =** "off" (default)
key **[11] =** "off" (default)

FIGURE 9

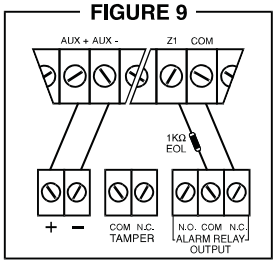
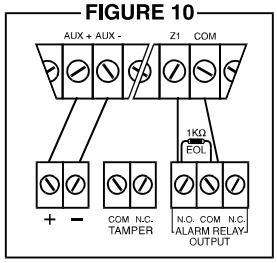


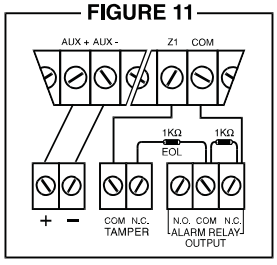
FIGURE 10



SINGLE ZONE connection with a 1KΩ EOL resistor, tamper recognition (N.C. contacts)

address **208,** key **[MEM] =** "off"
key **[10] =** See "Tamper/wire Fault Definitions
key **[11] =** and Options"
Tamper fault transmits separate code.

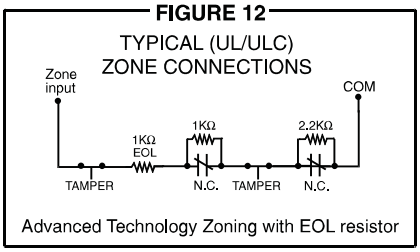
FIGURE 11



ADVANCED TECHNOLOGY ZONE connection, 2 zones with zone resistors, 1 EOL resistor (1KOHM) tamper (open) recognition, wire fault (short circuit) recognition (N.C. contacts)

address **208,** key **[MEM] =** "off"
key **[10] =** See "Tamper/wire Fault Definitions
key **[11] =** and Options"
address **210,** key **[8] =** "on"
Each zone transmits a separate alarm code.
Tamper/wire fault transmits a separate alarm code, indicated by fast flashing zone light on keypad, and displayed in ***Espload***.

FIGURE 12

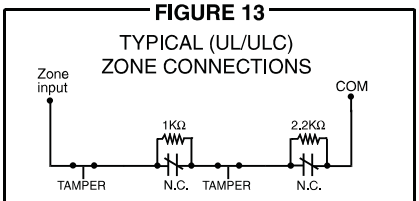


Advanced Technology Zoning with EOL resistor

ADVANCED TECHNOLOGY ZONE connection, 1 zone resistor (without EOL), tamper recognition (N.C. contacts)

address **208,** key **[MEM] =** "on"
key **[10] =** See "Tamper/wire Fault Definitions
key **[11] =** and Options"
address **210,** key **[8] =** "on"
Tamper fault transmits separate code.

FIGURE 13



Advanced Technology Zoning without EOL resistor

TAMPER/WIRE FAULT DEFINITIONS AND OPTIONS

When using 2 zone resistors, the panel offers four possible definitions for tamper/wiring recognition, independent of zone definition.

"Tamper/wire" disabled (Address **208**, Key **[10]** "off", Key **[11]** "off")
Tamper/wiring failure recognition is disabled.

"Trouble" enabled (Address **208**, Key **[10]** "off", Key **[11]** "on")
Tamper/wiring failure will generate an alarm, when armed. A trouble report code will be sent to the central when disarmed.

"Silent alarm" enabled (Address **208**, Key **[10]** "on", Key **[11]** "off")
Tamper/wiring failure will generate a silent alarm (no siren) when the system is disarmed. Alarm and trouble report codes will be sent to the central.

"Audible alarm" enabled (Address **208**, Key **[10]** "on", Key **[11]** "on")
Tamper/wiring failure will generate an audible alarm (siren). Alarm and trouble report codes will be sent to the central.

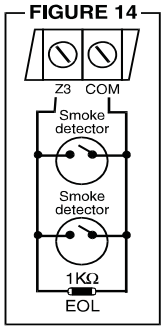
Exception: When the zone definition is "24 hour", the tamper definition follows the audible/silent alarm arm definition of the "24 hour" zone.

Tamper recognition addresses:
Tamper report and restoration codes should be programmed at addresses **191** and **180.**

FIRE CIRCUIT

The **fire** zone (enabled by defining zone 3 as "24 hour') should always be connected with a **1KΩ EOL** resistor (PN201100200-PRT on UL systems). If there is a line short in the fire zone, a fire alarm will be generated. If the line is "open", a "fire loop" trouble report will be sent to the central and trouble indicator **[11]** will illuminate on the keypad.

FIGURE 14



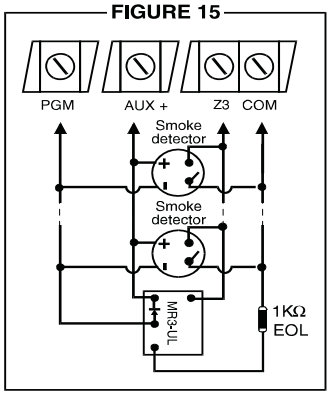
For UL/ULC installations, a 4 wire, latching, smoke detector (UL - Falcon Model 5454, ULC - BRK Model 2412) must be used. To supervise power supply, an “end of line” relay (Model MR3) is installed. This relay’s contacts will cause a FIRE TROUBLE in the event the power is interrupted.

To reset (unlatch) smoke detectors after an alarm, power to detectors must momentarily be interrupted. To do so, connect the negative (-) side of smoke detector power to PGM1. PGM1 should then be programmed “Timed N.C.” (normally closed), programmed to “open” when any two keys on the keypad are pressed simultaneously.

Example:
To program **PGM1** to conduct smoke detector reset when **[CLEAR]** and **[ENTER]** are pressed at the same time.

Address **195** = **[BYP]** (in the first digit)
Address **196** = **[5] [10]**
Address **198** = **[2ND] [6]**
Address **254** = **[10] [10] [4]**

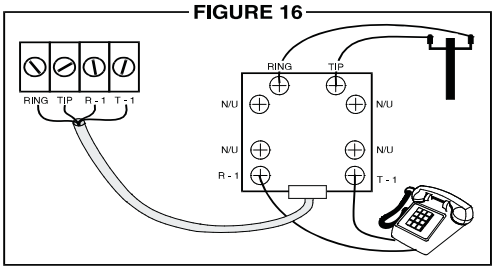
FIGURE 15



TELEPHONE LINE CONNECTION

Connect the incoming telephone company wires into "TIP" and "RING". Wires should then be run from "T1" and "R1" to the installation's phone system.

FIGURE 16



POWERING UP THE UNIT

When keypads are installed far from the control panel, a keypad should be temporarily connected close to the panel to conduct "power-up" testing. Connect the transformer. After 5 seconds, begin testing the unit. Enter random commands on the keypad. It should "beep" in response to these commands. Open a zone to ensure that keypad and panel are responding to signals. If the keypad does not respond and indicator lights do not illuminate, check for AC voltage at the “AC” terminals. If 16VAC is flowing, then keypad wiring should be verified. Also check for a short between "black" and "red” keypad wires.

Panel Programming Methods

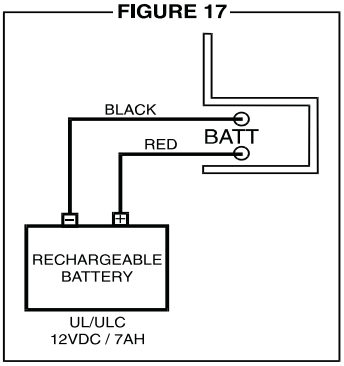
To conduct panel programming, use the keypad or initiate communication with Esploadd (see page 11). Use of ***Esploadd*** is highly recommended, as it greatly reduces the potential for data entry errors during programming. For Keypad Programming instruction, refer to "Programming Guide".

Battery Hook-Up (required on UL/ULC installations)

Use a 12VDC 7AH rechargeable acid/lead or gel cell battery. Connect "red" battery lead to positive battery terminal, and "black" battery lead to negative battery terminal. Reversed connections will blow the battery fuse. Battery should not be connected until AC panel connections have been made. After connecting battery **[TRBL]** key should illuminate. Pressing **[TRBL]** causes key **[8]** to illuminate (trouble indicator for "timer loss"). (See "Trouble Display Monitoring" section, page 27-28.)

Warning: **Do not connect battery until all wiring is completed.**

FIGURE 17



Battery Test

The panel verifies battery connection every 60 seconds. If the battery is not connected, trouble indicator key **[1]** illuminates. If battery is connected, a 4 second test of battery under load is conducted. Test failure causes trouble indicator key **[1]** to illuminate, indicating that battery capacity is insufficient. When the panel runs on battery power, with or without AC, if battery voltage drops to 10.5 volts, trouble indicator key **[1]** will illuminate. (If programmed, a trouble report code will also be sent to the central station.) At 8.5 volts all outputs are closed.

//// INSTALLER PROGRAMMING

ESPLOAD

Esprit control panels can be remotely programmed with Esploadd upload/download software, or on site using Esploadd and a ADP-1 adapter. Advanced Esploadd software can carry out a full upload or download in just 45 seconds, and provides many powerful features, including a comprehensive "monitoring" mode to oversee all panel activity, a "scheduler" to initiate preprogrammed tasks at set intervals, and a "batch" mode to carry out preprogrammed tasks following a call from the panel**.** There is no limit to the number of account files or panel defaults that can be created, and thousands of programming combinations can be assigned to PGM outputs using Esploadd. Esploadd can be converted to the language of your choice, and individualized help menus can also be generated. Contact your local Paradox Distributor for your free copy of Esploadd software.

KEYPAD

To program Esprit panels via the keypad, first complete the programming work sheets and follow the programming procedures outlined in the **"Programming Guide".**

PROGRAMMABLE FEATURES

Hexa Programming:

All digits from 0 to F are valid. Programming values are programmed into memory locations from address **000** to **007**.

1) Press **[ENTER]** + installer code
2) [ENTER] will flash (programming mode)
3) Enter 3 digit memory address (**000-007**)
4) Enter 2 digit data.
5) To erase, press **[CLEAR]**. To save press **[ENTER].**
6) Go to step 3 for next address.

To exit programming mode, press **[CLEAR]**.

Panel Answer Options: (Address **000**) DIRECT ADDRESS

The first digit entered disables the "Answering Machine Override" (key **[2ND]** or key **[1]**), or determines the period of time between first and second call.
The second digit entered determines the number of rings required before the panel will answer. If **[2ND][2ND]** is entered, the panel will not answer. (Default value is **[2ND] [8]**.)

ADDRESS 000 - FIRST DIGIT - ANSWERING MACHINE OVERRIDE

Value entered disables this feature or determines the period of time between first and second call.

[2ND] or **[1]** = Answering machine override disabled

[2] = 16 seconds	**[4]** = 32 seconds	**[6]** = 48 seconds
[3] = 24 seconds	**[5]** = 40 seconds	**[7]** = 56 seconds
[8] to **[F]** = 60 seconds		

Panel Identifier: (Addresses **001**, **002**) DIRECT ADDRESS

This four digit code identifies the control panel to the PC before uploading can be initiated. Each pair of code digits has its own memory address. There is no default code. Any hexa digits from 00 - FF can be entered. Program first 2 digits in address **001** and second 2 digits in **002**.
Related features: "Panel Answer Options" **000** *"Call back"* **206**, **[4]**

PC Password: (Addresses **003**, **004**) DIRECT ADDRESS

This four digit download password identifies the PC to the panel, prior to beginning the programming download process. Program the first 2 digits in address **003** and the second 2 digits in **004**.

Installer Code: (Addresses **005**, **006**, **007**) DIRECT ADDRESS

(Use only numeric keys from **[1]** to **[10]** to enter installer code. Key **[10]** = 0.)
The default installer code contains 6 digits. Default code for the 728 is **282828**, and for the 738 is **383838**. (Codes can also be programmed to contain 4 digits, address **208**, **[9]** "on".) Create a new installer code by entering the values of 1st and 2nd digit at address **005**, 3rd and 4th digit at address **006**, and 5th and 6th digit at address **007**.

The installer code has access to all programming addresses, except **008-058**. It does not provide access to arming/disarming or user code programming. It can be used to modify itself.
Related features: "Installer lock" **255** *"User/access code length"* **208**, **[9]**

INTELLI ZONE Delay: (Address **059**) DIRECT ADDRESS

The first digit determines the period of time in which two intellizone detections must take place, or in which an intellizone must remain open, in order for an alarm to be communicated.

First digit: (factory default **[3]**)

[1] = 16 sec.	**[5]** = 80 sec.	**[9]** = 144 sec.	**[BYP]** = 208 sec.
[2] = 32 sec.	**[6]** = 96 sec.	**[10]** = 160 sec.	**[MEM]** = 224 sec.
[3] = 48 sec.	**[7]** = 112 sec.	**[11]** = 176 sec.	**[TRBL]** = 240 sec.
[4] = 64 sec.	**[8]** = 128 sec.	**[12]** = 192 sec.	**[2ND]** = 256 sec.

Streamlined Section Programming:

To begin programming:
Press **[ENTER]** + installer code + **[2] [7]**. (**[ENTER]** and **[2ND]** keys will flash.)
Enter 2 digit section for programming (00 - 34). (**[ENTER]** key is "steady" and **[2ND]** key is "off".)
Enter 8 digits to program the section. Keypad will beep, to show section has been programmed.
Data is saved and the next section is advanced to automatically for programming.
To select a specific section, press **[CLEAR]** or **[ENTER].** (**[ENTER]** and **[2ND]** keys will flash.)
Enter 2 digit section (00-34). (**[ENTER]** key is "steady" and **[2ND]** key is "off".)
To exit programming mode, press **[CLEAR]**.

Telephone and Account Numbers

Three telephone numbers can be programmed: a PC telephone number and two central station numbers. Each number can contain a maximum of 16 digits. Special instructions can be entered in the telephone numbers using the following keys:

[10]	= the number "0"	**[BYP]**	= switch from pulse to tone while dialing
[11]	= *	**[MEM]**	= pause 4 seconds
[12]	= #	**[TRBL]**	= end of number

If only one central station telephone number is available, the same telephone number must be programmed for telephone number 1 and 2. A separate "communicator reporting" format can be selected for each central station telephone number at address **194**.

Computer telephone number: (Addresses **060-067**) **SECTION 00 - 01**

The PC download telephone number is dialed in three situations. It is dialed when communication with PC is initiated from the keypad. It is the automatic "call back" number, when the "call back" feature is enabled (**206**, **[4]** "on"). If the event buffer is ready to report, and "automatic event buffer transmission" feature is enabled (**208**, **[2ND]** "on"), this number will be dialed in order to download the event list.
Related features: *"Panel Identifier"* **001** - **002** **"***PC password"* **003** - **004** *"Call back"* **206**, **[4]**

Central station telephone number 1 (Addresses **068-075**) **SECTION 02 - 03**
Central station telephone number 2 (Addresses **076-083**) **SECTION 04 - 05**

The panel can communicate with two central station numbers. Each of the numbers can be assigned a separate reporting format.
Related features: *"Communicator Formats"* **194** *"Reporting options"* **206**, **[11]** and **[12]**
Esploud note: Upon alarm, upload/download in progress will be interrupted and the panel will dial the central.

System account codes (system "A"/"B") (Addresses **084-087**) **SECTION 06**

All report codes are preceded by a system account code to ensure correct identification of active zone(s) in a partitioned system. **If partitioning is deactivated, the same value should be programmed for both account numbers.** To program account codes for System "A" and "B", press **[ENTER]** + installer code + **[2] [7]** + **[10] [6]**. The first four digits entered after this sequence correspond to the System "A" account code, and the last four digits to the System "B" account code.

Reporting Codes: (Addresses **088-193**) **SECTION 07- 33**

The panel can report information regarding system and "protected area" status to the central monitoring station, when reporting is activated at address **206**. All data to be communicated should be assigned a 2-digit hexa reporting code, consisting of numbers from 0-15. Examples of two digit hexa code combinations are **[6] [BYP]** and **[9] [TRBL]**. Written in hexa notation, these codes are **[6] [D]** and **[9] [F]**.

Using the keypad for hexa digit entry, keys **[10]**, **[11]**, **[12]**, **[BYP]**, **[MEM]** and **[TRBL]** correspond to hexa digits A, B, C, D, E and F, respectively.

The **[2ND]** key's value is "skip" (empty). It is ignored by the panel, so to avoid reporting a specific condition to the central, enter **[2ND][2ND]** after the report address for that condition. Also, when programming 3 digit account codes and 1 digit alarm codes (3-1 reporting), use **[2ND]** in lieu of the first digit.

All report codes are assigned to a system account, whether or not partitioning is activated. Arm/disarm reports are assigned to System "A" when partitioning is "off", or to the system account to which they belong, based on code priority assignment, when partitioning is activated.
Trouble and special report codes are always assigned to System "A".

Arming codes/disarming codes: (Addresses **088-119**) **SECTION 07 - 14**

System access codes can be programmed to generate hexa report codes that communicate the identity of the **user** arming/disarming the control panel to the central monitoring station. Each user code can be assigned an arm/disarm report code. **(*Esploud* and the master code can be assigned a report code at addresses 188/189 - see "Special codes", page 14.)**

Zone alarm codes: (Addresses **120-143**) **SECTION 15 - 20**

Alarm report codes programmed will be sent to the monitoring station, identifying the zones that are generating alarms.

Zone restore codes: (Addresses **144-167**) **SECTION 21 - 26**

Zone restoration codes programmed will be sent to the monitoring station, identifying zones returning to normal status after alarms.

Trouble codes: (Addresses **168-175**) **SECTION 27 - 28**

8 trouble status codes can be reported to the central, if programmed: max. auxiliary current, bell disconnect/max. bell current, battery disconnected/low voltage, power failure, program change (indicates that someone has initiated "installer" or Espload programming), timer loss, fire loop trouble, and test report.
(See "**Trouble Display/Monitoring**", page 27-28, for a list of trouble conditions displayed on the keypad.)

Trouble restore codes: (Addresses **176-183**) **SECTION 29 - 30**

If trouble conditions occur and are reported, once normal status is re-established, a "restoration" code can be transmitted to the central to indicate that the "trouble" situation has been rectified. Note: All Tamper/Wire Faults must be restored before a restoration code is transmitted.

Special codes: (Addresses **184-193**) **SECTION 31 - 33**

These codes are assigned to report 10 special status conditions.

Panic 1	Panic alarm will be reported to the central if keys **[1]** and **[3]** are pressed for 2 seconds.
Panic 2	Panic alarm will be reported to the central if keys **[4]** and **[6]** are pressed for 2 seconds.
Panic 3	Panic alarm will be reported to the central if keys **[7]** and **[9]** are pressed for 2 seconds.
Partial arming	Will be reported to the central if the control panel is armed while any zones are bypassed or when the system is force armed.
Auto/Esploaad Arm	Will be reported to the central when Esploaad is used to arm the control panel or when the system arms itself automatically (on “no movement” or at a specified time.)
Arm with master code	Will be reported to the central when the master code is used to arm control panel.
No movement/ late to close	Will be reported to the central when there is no movement in the protected area for a designated time period, or if the system has not been armed by the required time.
Tamper report	The hexa digit entered for this report code will replace the first digit of all zone alarm report codes when tamper "trouble" occurs. This identifies zone location of the tamper "trouble" to the central (auto-generated codes).
Disarm with Esploaad	Will be reported to the central when Esploaad is used to disarm the control panel.
Disarm with master code	Will be reported to the central when master code is used to disarm control panel.

Communicator Formats (Address **194**)

Ademco contact ID (all codes reported) (key **[10]**)

All report codes are preprogrammed in this **DTMF** reporting format. There is no need to program values for addresses **088 -193** if both central station numbers use this format. Contact ID event codes are listed below:

CONTACT ID EVENT CODES

CODE	DEFINITION	REPORTING ADDRESS	CODE	DEFINITION	REPORTING ADDRESS
100:	AUXILIARY ALARM	185	321:	BELL 1 TROUBLE	169, 177
110:	FIRE ALARM	122, 146,186	351:	TELCO 1 FAULT	183
120:	PANIC ALARM	184	373:	FIRE LOOP TRBL	174, 182
130:	BURGLARY	120 to 167	401:	O/C BY USER	088 to 119, 189, 193
144	SENSOR TAMPER	180,191	404:	LATE TO O/C	190
300:	SYSTEM TROUBLE	168, 176	407:	REMOTE ARM DWNLD	188, 192
301:	AC LOSS	171, 179	570:	BYPASS	187
302:	LOW SYSTEM BATT	170, 178	602:	PERIODIC TEST	175
305:	SYSTEM TIME RESET	173	625:	TIME DATE RESET	181
306:	PROGRAM CHANGED	172			

Ademco contact ID (selected codes reported) (key **[9]**)

Select certain report codes to be reported by entering any value other than **[2ND][2ND]** at the required addresses. The preprogrammed Contact ID report code for that event will then be reported. Default value of all addresses is **[2ND][2ND]**.

Ademco express (key **[8]**)

This high speed reporting format communicates events in 2 seconds.

DTMF - no handshake (**[TRBL]** key)

This format can be utilized in reporting situations where a central station receiver is not connected to the telephone number. It's useful for personal reporting where a "handshake" is not required. (In "double reporting" mode, first central station number can be connected to a receiver, while second can be used for personal reporting using "no handshake" format. The panel will make two attempts to call the "no handshake" number.)

Standard pulse formats

Ademco slow, Silent Knight, Sescoa, and Radionics are programmable with keys **[2ND]** to **[7]**.

Programmable Output (PGM) Types (Address **195**) **SECTION 33**

Regular N.O. Solid state switch conducts to negative (*50mA) upon an event or events, and returns to its original state (N.O) once the conditions that triggered it have terminated.

Regular N.C. Solid state switch opens circuits from ground upon an event or events and returns to its original state (N.C.) once the conditions that triggered it have terminated.

Timed N.O. Solid state switch conducts to negative (*50mA) upon an event or events and remains activated for the amount of time programmed at address **254**.

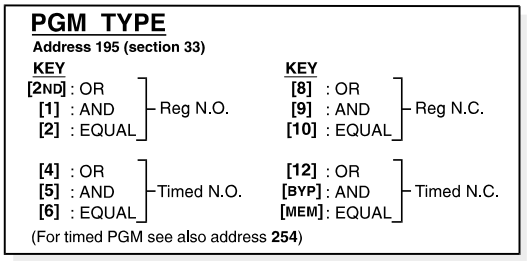
Timed N.C. Solid state switch opens circuits from ground upon an event(s) and remains activated for the amount of time programmed at address **254**.

"OR" logic Causes the programmable output command to occur when one or more selected events from a specified group of events takes place (example: key **[1] OR [2]** is pressed on keypad.)

"AND" logic Causes the programmable output command to occur when all selected events from a specified group of events take place (example: key **[1] AND** key **[2]** are pressed.)

"EQUAL" logic Causes the programmable output command to occur when all events from a specified group of events take place (example: key **[1]** and **[2]** are pressed but **[3]**, **[4]**, **[5]**, **[6]**, **[2ND]** and **[TRBL]** are not pressed.)

*UL tested for 30mA only.



Typical PGM (Programmable Output) Programming

FUNCTION	DESCRIPTION	TYPE	HEXA PROG. Address 196/197	HEXA PROG. Address 198/199
**Ground start Pulse (Timed N.O.)	*Provides **3 sec.** pulse before communication attempt.	5	5/2	[2ND]/8
Push key **[1]** and **[2]** (Regular N.O.)	Provides output when keys **[1]** and **[2]** are pressed simultaneously.	1	5/8	[2ND]/6
System armed (Regular N.C.)	Output removed when system armed.	9	2/B	[2ND]/8
Strobe output (Regular N.O.)	Provides latching output on alarm, until disarmed.	1	2/C	[2ND]/2
Fail to communicate (Timed N.O.)	*Provides output upon fail to communicate for **2 minutes**.	5	2/6	[2ND]/4
2nd telephone line relay (Regular N.O.)	Provides output after one failed communication attempt.	[2ND]	7/A	[2ND]/E
Kiss off (Timed N.O.)	*Provides **3 sec.** output after signal received at monitoring station.	5	7/D	[2ND]/8
Time output (Timed N.O.)	*Provides **3 sec.** output every day at 8PM.	6	2/3	1/4

***Times must be programmed at address 254.**

****Not permitted on UL listed systems**

Note: For other PGM operations, i.e. home automation, programmable controller, false alarm reduction, etc., use ***Espload*** software to provide programming codes (over 1000 options available). (If **other** programming options are needed, fax your requests to Paradox Technical Support at 514-491-2313.)

System Options

(Default = **"off"** for addresses **200-242**)

Feature select programming

"ON"/"OFF" status of the key lights determines feature selection.
In programming mode, enter 3 digit memory address (**200** to **242**).
To save entries, press **[ENTER]**. To exit programming mode press **[CLEAR]**.

Code priority

(Addresses **200** to **204**)

Keys **[1]** to **[12]** represent the corresponding code number. Key **[1]** represents user code 1, **[2]** = 2, **[3]** = 3, etc. **[BYP]** = user code 13, **[MEM]** = user code 14, **[TRBL]** = user code 15, and key **[2ND]** = user code 16.

If partitioning is disabled (Address **206**, key **[8]** "off")

Address **200**: Lighted keys indicate which user codes can activate "stay" arming.
Address **202**: Lighted keys indicate which user codes can activate force "away" arming.
Address **204**: Lighted keys indicate which user codes can "bypass" zones.

If partitioning is enabled (Address **206**, key **[8]** "on")

Address **200**: Lighted keys indicate which user codes are assigned to System "A".
Address **202**: Lighted keys indicate which user codes are assigned to System "B".
Address **204**: Lighted keys indicate which user codes can "bypass" zones.

(See also page 26.)

TLM options

(Address **206**, key **[2ND]** and key **[1]**)

The system verifies the existence of a telephone line every 4 seconds. After successful tests, the dialer LED (green light) flashes briefly on control panel. If the test fails, LED illuminates 4 seconds "on", then 4 seconds "off". TLM trouble will be activated when less than 3 volts are detected in 4 consecutive tests.

Note: When the dialer detects a telephone ring, the TLM flashing stops for 1 minute.

There are three options for TLM use.
(1) Line test failure can generate a trouble indication.
(2) Line test failure can generate a trouble indication and an alarm if the system is armed.
(3) Line test failure will cause silent or panic zones to switch to audible mode.

TLM TABLE (TLM = Telephone Line Monitor)

KEY [2ND]	[1]	
OFF	OFF	— TLM is disabled (default)
OFF	ON	— TLM generate a trouble only
ON	OFF	— generates an alarm if armed
ON	ON	— silent alarm becomes audible

(address **206**, key **[9]** has to be **OFF**)

Arming using PS1 or keyswitch (Address **206**, key **[2]** and key **[3]**)

The PS1 bedside remote arming module or keyswitch can be used to stay arm, full arm, or disarm the system. The PS1 keyswitch is enabled at address **206**, key **[3].**
Key **[2]** "off": PS1 or keyswitch "regular" arms system.
Key **[2]** "on": PS1 or keyswitch "stay" arms system.*****

*****Note: If partitioning is enabled (address **206**, key **[8]** "on"), PS1 arms system "A" only. Use of PS1 is not recommended for partitioned systems.

Call back (Address **206**, key **[4]**)

For extra security, the panel can be programmed to call the PC back when communication is attempted by the PC. The panel will first answer the call, then Esplod and the panel will verify identification codes. The panel will then hang up and call the PC back and establish communication. Esplod automatically goes into the “wait for call mode” ready to answer when the panel calls back. The identification codes are verified again before allowing access to the panel.
*Related features: “Computer telephone number” **060-067**.*

Auto arm

On Time: (Address **206**, key **[5]**)
The panel may be programmed to arm at the same time every day. Program both the hour and minute (addresses **245, 246**) for arming. (This will also be the "auto test report" time, if enabled.) A late closing code may be programmed (address **190**).
*Related features: “Auto arm” **210**, **[2]** “Auto/Esplod Arm” **188** "Auto arming"* p.22.

No Movement: (Address **206**, key **[6]**)
If zone activity is not detected for a programmed period (address **253**) while disarmed, the panel can auto arm and/or send a "no movement" report (address **190**). Refer also to "No movement" p. 22.

Touch tone options (Address **206**, key **[7]**)

Tone (key **[7]** = "on") **or** pulse dialing can be programmed. If "pulse" is chosen for a central station phone number, "tone" dialing can be programmed for the other number. [**BYP**] ("switch from pulse to tone") should be entered in the second phone number during programming.

Partitioning (Address **206**, key **[8]**)

Partitioning is activated**,** (key **[8]** "on"). The panel's fully programmable zones (plus 2 remote keypad zones) can be divided into two systems. (See “System Partitioning”, page 25.)

Silent alarm (Address **206**, key **[9]**)

Key **[9]** "off":
Silent zones/panics generate only a silent alarm. Zones defined as "silent" at address **216** and keypad panic zones will not cause an audible alarm, however, the keypad **"armed"** light will flash and the alarm condition will remain until a valid user code is entered.

Key **[9]** "on":
Silent zones/panics generate only a report (The red keypad LED does not flash, and there is no need to "reset" the silent alarm.)
Silent delay zones generate an entry delay beep, and a report at the end of the entry delay.
Zone restore is always reported upon zone closure.

Memory display and auto zone shutdown are always active for silent zones (when enabled at address **206**, key **[TRBL]**.)
Silent alarms can be monitored by a PGM output. (Silent flag is cleared on report or disarm.)
On split reporting, silent zones/panic are reported to Telephone #1.
The Contact ID report for all zones is "burglary".

Dialing pulse rates

(Address **206**, key **[10]**)

This selection reflects the ratio between pulse time and "quiet" time. Select Pulse Europe for a 1:2 ratio (Key **[10]** = "off"), Pulse USA for 1:1.5. (Key **[10]** = "on")

Reporting options

Regular reporting (Address **206**, key **[11]** and key **[12]**)

To activate central station reporting, the feature must be enabled and all required reporting codes, except when using “Ademco contact ID (all codes reported)”, must be assigned a value other than **[2ND][2ND]**.

To establish communication, the communicator takes the telephone line and waits for a dial tone. If a dial tone is identified, the communicator will dial the **first** central station telephone number. If a connection is made, system report will take place and the communicator will hang up upon completion. If for any reason, communication is interrupted, the communicator will dial the **2nd** central telephone line and report only the events that were not reported during the interrupted attempt.
During a communication attempt, the communicator waits for a dial tone for up to 8 seconds. Even if a dial tone is not found, **the communicator will dial the central station.*** ** After 60 seconds, if communication has not been established, the dialer will hang up, wait 5 seconds and try the second number. This sequence will be repeated 8 times, switching back and forth between the 1st and 2nd number. (Regular reporting dialing procedure: **1,2,1,2,1,2,1,2**, "communicator report failure".)

***This feature is useful for PBX systems, which do not provide a dial tone. You can program the dialing sequence required to get a line on a PBX system, and this sequence will be added before the central station number. If there is a time delay between dialing and getting a line, this can be programmed into the dialing sequence using the **[MEM]** ("pause") key.

After 8 unsuccessful attempts, the redial sequence ends and "communicator report failure" will appear in the keypad’s trouble display (key **[7]** "on"). When the **next** reportable event occurs, (even if it is not programmed to report to the central), the communicator will again try to establish communication. If successful, all events stored in the event buffer that have not yet been reported will be communicated to the central.

Split reporting (Address **206**, key **[11]** "on", key **[12]** "off")

All "system" reports (i.e. trouble reports, arm/disarm reports, etc.) are sent to Telephone #2, until an alarm is generated. Following alarm generation, all activity, including alarm and restoration reports, is sent to Telephone #1 until the system is disarmed. When there is an alarm, any **ongoing** communication (upload/download or reporting to Telephone #2) will immediately be stopped and the panel will dial Telephone #1.

"System" reports dialing procedure: (2,2,2,2,2,2,2,2, "communicator report failure")
Alarm reports dialing procedure: (1,1,1,1,1,1,1,1, "communicator report failure")

Double reporting (Address **206**, key **[11]** "on", key **[12]** "on")

The panel will transmit all reports to both programmed telephone numbers. If, after 8 attempts using either number, communication is not established, "communicator report failure" will be displayed by key **[7]**.

Double reporting dialing procedure: (1,1,1,1,1,1,1,1, "communicator report failure")
(2,2,2,2,2,2,2,2, "communicator report failure")

Note: To stop communication attempts until the next reportable event, press **[ENTER]** + installer code + **[STAY]**.

Bell squawk

(Address **206**, key **[MEM]**)

Bell/siren will emit a 0.5 second “squawk” **once** upon arming, and **twice** upon disarming.
(Key **[MEM]** "on" = enabled)

Auto zone shutdown (Address **206**, key **[TRBL]** "on")

Key **[TRBL]** "on" = zones that initiate 4 consecutive alarms during the same armed period will be automatically bypassed. (Zones must be bypass-enabled at address **236**.) After a zone has been bypassed, the panel can send a "partial arming" report to the central (if programmed to do so at address **187**).

Note**:** Once auto zone shutdown has been enabled, it will either be activated after 4 "zone closure" restoration reports or 4 "bell cut-off" restoration reports, depending on which type of alarm restoration code has been activated at address **208**, key **[BYP]**.

Automatic event buffer transmission (Address **208**, key **[2ND]**)

Key **[2ND]** "**on**" = system will dial the computer telephone number programmed in Section **00** and **01** (addresses **060-067**) to upload the contents of the event buffer to the PC. (Esplead must be in "wait for call" mode.) The system will make two attempts to call the PC when the event buffer reaches 50% capacity. If communication is established, the system will then proceed to report the contents of the event buffer to the PC. Should transmission be interrupted before the complete contents of the buffer can be transmitted, or if after two attempts, communication is not established, the system will wait until the event buffer is full, before attempt to communicate with the central again.

If communication is established, the system will then proceed to report the contents of the event buffer to the PC. If after two attempts, communication is not established, each subsequent new event will erase the oldest event in the buffer, until the event buffer once again reaches 50% capacity.

Enable keypad panic signals (Address **208**)

Key **[1]** "on" = Panic 1 (keys **[1]** and **[3]**) enabled
Key **[2]** "on" = Panic 2 (keys **[4]** and **[6]**) enabled
Key **[3]** "on" = Panic 3 (keys **[7]** and **[9]**) enabled

Keypad panic options (Address **208**)

Key **[4]** "off" = Panic 1 silent	Key **[5]** "off" = Panic 2 silent	Key **[6]** "off" = Panic 3 silent
Key **[4]** "on" = Panic 1 audible	Key **[5]** "on" = Panic 2 audible	Key **[6]** "on" = Panic 3 fire

Silent operation
When panic keys **[1]** and **[3]**, **OR [4]** and **[6]**, **OR [7]** and **[9]** are pushed simultaneously for 2 seconds, a single confirmation beep is sounded, codes programmed at addresses **184**, **185**, and **186** are transmitted and the alarm latches, flashing the keypad **"armed"** light until reset by a user code.
Audible operation
When panic keys are pushed in addition to alarm codes being transmitted, the alarm output (bell/siren) will activate until reset by a user code or until the bell cut-off time (address **250**) expires.
Fire operation
Same as audible operation except that bell/siren output will be pulsed (intermittent "on"/"off").

"One key" arming enable (Address **208**)

Key **[7]** "on" = Pushing key **[10]** for 2 seconds "full" arms system.
Key **[8]** "on" = Pushing key **[11]** for 2 seconds "stay" arms system.

User/access code length (Address **208**)

Key **[9]** "off" = 6 digit user/access codes and installer code.
Key **[9]** "on" = 4 digit user/access codes and installer code.

Tamper/wire fault definitions (Address **208**)

Note: If key **[10]** and key **[11]** are both "off", this means that tamper and wire faults will not be recognized. See "Loop configuration and zone connections" page 8-9, "Tamper/Wire Fault Definition and Options", page 9, and "Tamper/wire Fault Definition table" in the "Programming Guide".

Beep on exit delay (Address **208**)

Key **[12]** "on" = the keypad will sound on exit delay (except when in “stay” arming). Frequency of intermittent beeps increases during the last 10 seconds of the exit delay period.

Zone restore transmission (Address **208**)

Key **[BYP]** "off" = If zone is closed, restoration code will be transmitted after "bell cut-off".
Key **[BYP]** "on" = Restoration code transmitted as soon as zone is closed.
Silent zones are always restored as soon as they are closed.

Zones with EOL resistors (Address **208**, key **[MEM]**)

See "Loop configuration and zone connections" pages 8-9.

Always report disarm (Address **208**)

Key **[TRBL]** "off" = always reports disarm codes.
Key **[TRBL]** "on" = reports disarm code only after alarm.

Exclude power failure from trouble display (Address **210**, key **[2ND]**)

Key ="on": Power failure will not make the **[TRBL]** key flash.
This trouble condition may still be viewed after pressing **[TRBL].**

“Associated zone” deactivation: (Address **210**, key **[1]**)

Key = “on”: Disables burglar alarm zone associated with fire zone. Wire fault on the fire zone (fire trouble) will not cause an alarm on the associated burglar zone.

Panel	Fire Zone	Associated zone
728	3	4 (ATZ)
738	3	9 (ATZ)

Arming Options

Auto arm (Address **210,** Key **[2]**)

Key ="off": When system auto arms (on time or "no movement"), "regular" arming will take place (if all zones are closed).
Key ="on": When system auto arms (on time or “no movement”), "**STAY**" arming will take place (if all zones are closed). If zone partitioning is programmed (address **206**, key **[8]**), System “A” will arm. (See also "Auto arming" p 22.)

No tamper bypass (Address **210**, key **[6]**)

Key ="off": Device tamper will not follow zone bypass.
Key ="on": Device tamper will follow zone bypass.

Advanced Technology Zoning (ATZ) (Address **210**, key **[8]**)

Key = “on” Permits the use of two zone resistors per zone input. Each zone can transmit a separate alarm that can each transmit its own alarm.
Key = “off” Single zone per zone input.

Audible trouble warning (Address **210,** Key **[9]**)

Key ="on": Trouble conditions cause intermittent **audible** trouble warning on keypad. To silence, push **[TRBL]**.

20 sec. delay before alarm transmission (Address **210,** Key **[10]**)

Key ="on": The first time an alarm is generated, there will be a twenty (20) second delay before reporting begins. During the waiting period, system disarm will cancel all pending reports.

Keypad zone supervision

Keypad 1 zone supervision (Kpd 1) (Address **210**, key **[11]**)
"**ON**" = enabled "**OFF**" = disabled

Keypad 2 zone supervision (Kpd 2) (Address **210**, key **[12]**)
"**ON**" = enabled "**OFF**" = disabled

Keypad zone supervision allows the system to verify the presence of a keypad and its keypad zone(s). When enabled, only **two** keypad zones (one configured as **keypad 1**, and one configured as **keypad 2**) can be used at one time. Any other keypad zone terminals **must be** shorted.

If using a 616, 626, or 633 LED keypad with software version 3.9 or earlier, **OR** a PS1 version 1.1, **OR** a 639/640 keypad with its keypad zone supervision feature disabled (address 32, key **[3]** "off"), or if the keypad zone is not used:

- **KEYPAD ZONE SUPERVISION FEATURE MUST BE "OFF".**

If using a 616, 626, or 633 LED keypad with software version 4.0 onward, **OR** a PS1 version 2.0 onward, **OR** a 639/640 LCD keypad with its keypad zone supervision enabled (address 32, key **[3]** "on"):

- **KEYPAD ZONE SUPERVISION FEATURE MUST BE "ON".**

Related features: Keypad connections. p.8

728 (no ATZ): Kpd 1 = Zone 5 Kpd 2 = Zone 6	**738** (no ATZ): Kpd 1 = Zone 7 Kpd 2 = Zone 8
728 (with ATZ): Kpd 1 = Zone 9 Kpd 2 = Zone 10	**738** (with ATZ): Kpd 1 = Zone 13 Kpd 2 = Zone 14

Zone Definition (Addresses **212-242**)

Zone definition is assigned during "feature selection" programming. Turning zone key "on" or "off" at addresses **212**-**242** assigns a particular definition to the zone. (See Programming Work Sheets.)

INTELLI ZONE definition (Addresses **212, 214**)

Key "ON": An alarm will be generated and communicated following any **two** detections in zones assigned this definition, whether the two detections stem from a single intellizone or any two separate intellizones - as long as the two detections take place within a designated time frame. An alarm will also be generated and communicated if an intellizone stays "open" for the total length of the designated "intellizone" delay. The "intellizone" delay, which determines the period of time (between 16-256 seconds) in which two detections must take place or an intellizone must remain open, is programmed at address **059**. "Intellizone" definition is disregarded while the panel is in audible alarm.

Key "OFF": An alarm is generated as soon as the zone is opened. This feature should be disabled on UL listed systems.

Silent/audible (Addresses **216, 218**)

Silent zones (keys "on") report alarms without triggering bells/sirens. (Reminder: fire zone is never silent.) Audible zones (keys "off") will trigger a bell or siren upon alarm generation.

24 hour - fire/regular (Addresses **220, 222**)

"24 hour" zones (keys "on") generate alarms whenever the zone is detected, even if the system is not armed. Zone 3 becomes a fire zone when defined "24 hour". The fire zone should always be connected with a 1K**Ω** EOL resistor. If there is a line short in the fire zone, a fire alarm will be generated. If the line is "open", a fire trouble report (if assigned at address **182**) will be sent to the central, and trouble indicator **[11]** and fire zone key **[3]** will flash on the keypad. Alarms in a fire zone generate an intermittent output signal, regardless of system arming status.

Instant (Addresses **224, 226**)

"Instant" zones (key "on") will immediately generate an alarm when detected while the system is armed. There is no entry delay.

Follow (Addresses **228, 230**)

"Follow" zones (key "on") are "instant" zones that switch to "delay" definition during entry delay.

Delay 2 (Addresses **232, 234**)

One of two different zone delays (delay 1 & delay 2) can be assigned to each zone. Zones activated at this address are assigned "Delay 2" definition. The length of zone entry delays is programmed at addresses **248**-**249**. Any zones that are not activated at addresses **220-232** are assigned "Delay 1" zone definition.

Note: When more than one zone definition is selected, zone definition priority is assigned in this order: (1) 24 hr., (2) instant, (3) follow, (4) delay 2 and (5) delay 1.

Bypass-enabled (Addresses **236, 238**)

"Bypass-enabled" zones (keys "on") are zones that can be bypassed during "manual bypass" arming and auto zone shutdown. The fire zone cannot be bypassed.

Note: If a zone should not be bypassed, turn "off" its corresponding zone key.

System assignment (Addresses **240, 242**)

Refer to "System Partitioning", page 25)

Related programming: "Partitioning **206**, **[8]***."*

Special Timing Functions

3 Digit Decimal Value Programming

Decimal programming is used to program addresses **244** to **255**. Values entered must contain 3 digits.

Decimal value programming:

1) Press **[ENTER]** + installer code. (**[ENTER]** key will flash.)
2) Enter 3 digit address (**244** to **255**).
3) Enter 3 digit DECIMAL value.
4) To erase, press **[CLEAR]**. To save, press **[ENTER]**.
5) Repeat from step 2 onward for next address. To exit programming mode press **[CLEAR]**.

"No movement"

If a time is programmed at address **253**, and a report code is entered at address **190** (**SECTION 32**), the panel will send a report to the central, when there is no movement in the protected area for a designated time period.

"Late to close"

If the system is not armed by a specified time (addresses **245, 246**) the code programmed at address **190** (**SECTION 32**) will be transmitted.

Auto arming

The panel can be programmed to automatically arm itself every day in two ways: at the same time programmed for the auto test report (addresses **245**, **246**) **and/or** once the "no movement" delay has elapsed (address **253**). To program "auto arming", go to address **206** and enable key **[5]** (auto arm on time), and/or key **[6]** (auto arm on "no movement"). All zones must be closed in order for the system to auto arm. If panel fails to auto arm, only the "no movement/late to close" report will be transmitted. The "auto arm" report is programmed at address **188** (**SECTION 32**).

Operational note regarding special timing functions

The time programmed at addresses **245**, **246** can be used to:

- Specify the time of day for the Test Report (code programmed at address **175** (**SECTION 28**).
- Transmit the Late to Close/No Movement code (address **190** (**SECTION 32**) if the system is not armed by a specified time.
- Auto-arm the system and if programmed, transmit the arming code at address **188** (**SECTION 32**) after transmitting the Late to Close/No Movement code (as above).

The amount of time programmed at address **253** (Max = 63.75 hours) can be used to;

- Transmit the Late to Close/No Movement code, address **190** (**SECTION 32**), if there is no movement in the protected area while the system is disarmed.
- Auto-arm the system and if programmed, transmit the arming code at address **188** (**SECTION 32**) after transmitting the Late to Close/No Movement code (as above).

The "late to close/no movement" code programmed at address **190** (**SECTION 32**) will be transmitted;

- at the time programmed at addresses **245** and **246** if the system is not armed (Late to Close).
- after the time programmed at address **253** expires (No Movement).

The amount of time programmed at address **254** (Max = 127 minutes) can be used to:

- designate the length of time a programmable output (PGM) will remain active following a specified event.

Auto arm/report options

1) Report the code programmed at address **175** after the number of days programmed at address **244**. (To disable, program **000** at address **244.**)
2) Send a "late to close" code programmed at address **190**.
3) Auto arm the system (on time) if enabled at address **206**, key **[5].**

Exit delay (Address **247**)
Range 001 to 255 seconds (*factory default 060 seconds).* Applies to all zones upon arming.

Entry delay 1 (Address **248**)
Range 001 to 255 seconds (*factory default 045 seconds).* Applies upon entry to all zones **not** selected at addresses **220** to **232**.

Entry delay 2 (Address **249**)
Range 001 to 255 seconds (*factory default 045 seconds).* Applies to all zones selected at address **232,** upon entry.

Bell cut-off time (Address **250**)
Range 001 to 255 minutes (*factory default 005 minutes).*

Zone speed (Address **251**)
Range 001 to 255 X 15mSec., (*factory default 600 mSec).* Maximum time 3.8 seconds.

Power failure report delay (Address **252**)
Range 001 to 255 minutes, (*factory default 030 minutes),* (000 = disabled). Delay code reported at address **171**.

Time for "no movement" report (Address **253**)
Range 001 to 255 X 15 minutes, (*factory default 8 hours),* (000 = disabled). System will automatically arm after programmed number of minutes of inactivity if enabled at address **206**, key **[6]**, or will transmit code programmed at address **190**. (Maximum time 63.75 hours)

PGM timer setting (Address **254**)
Range 001 to 127 seconds or 128 (1 minute) to 255 (127 minutes) (add number of minutes to 128;
i.e. For 5 minutes = 128 + 5 = 133
For 127 minutes = 128 + 127 = 255
Applies to PGM 1 and 2 if selected at address **195**. (Maximum time, 127 minutes)

Installer Lock (Address **255**)

If **147** is programmed at address **255**, all programming will be locked and **will not** be affected when the system is reset.

"Power-down" reset

(1) Remove battery and AC to power down the unit.
(2) Connect a jumper between "reset jumper" pins.
(3) Connect AC and/or battery.
(4) Wait 3 seconds.
(5) Remove jumper.

Factory default installer and master codes will be reinstated. Values entered at addresses **059** - **243,** as well as all user codes, will be erased (**[2ND] [2ND]**). Programmed values of all other addresses do not change.

//// USER / KEYPAD FUNCTIONS

The ***Esprit***'s innovative keypads take a new approach to security features and functions. Each numeral from 1 to 12 on the keypad represents an actual zone. When the **[2ND]** key flashes, the same numerals represent a second set of 12 zones, zones 13 to 24. When the zone light is "off", the status in the protected zone is normal. If the zone light is "on", this means the zone is open.

"CONF" confirmation beep: an intermittent series of beeps indicating a successful keypad entry.

"END/REJ" end/rejection beep: 1 long tone indicates that the operation was incorrectly entered on the keypad.

SYSTEM ARMING/DISARMING OPTIONS

Regular System Arming (default code 474747)

(Without partitioning - for information on partitioned system arming, see page 25-26)

The green **"ready"** light must be illuminated. This **"ready"** indicator will only illuminate if all zones are closed. All door/window contacts must be closed, and any movement in motion detector-protected areas must be halted. When the **"ready"** light illuminates, a valid access code should be entered.

Upon entry of this code, the red **"armed"** light will illuminate, followed by the keypad **"CONF"** beep. (If the access code is entered incorrectly, the **"END/REJ"** beep will sound. If an incorrect entry is made at any time, press **[CLEAR]** and re-enter the data.) The green **"ready"** light will flash for the period of the exit delay, and on the 738, the **[STAY]** and **[AWAY]** keys will flash.

Note: Keypad will beep on exit if programmed at address **208,** key **[12]**.

Force (Away) Arming **[AWAY]** + access code

To arm the system rapidly without waiting for the "ready" light, use the "away" force arming feature. The **[AWAY]** key should be pressed, followed by a valid access code (address **202**). Once the exit delay expires, any open zones will not be considered “activated” by the panel. Open zones will not be protected, and will not generate an alarm or prevent arming. These “away” zones will become active (and therefore, protected) as soon as they are closed. Armed status on the 738 is indicated by illumination of the **[AWAY]** key. A "partial arm" code will be sent if programmed.

Please note: This feature is not recommended for regular use because force arming with open zones can reduce the efficiency of system protection.

Stay Arming **[STAY]** + access code

When "stay arming" is activated, the security installation is "partially" armed. This means that only selected **STAY** zones are armed (address **240**), so that users can remain in the protected area. This convenient feature (programmed at address **200**) offers individuals arming the system the choice to leave the premises during an exit delay (without altering the "stay arm" status), or remain on the premises. A system user returning to a protected area that is "stay" armed can re-enter and disarm, as long as a valid access code is keyed in during the entry delay. (During “Stay” arming, the 728’s **[STAY]** key is "on" constantly. The 738 **[STAY]** key flashes during “stay” arming.)

Fast "Regular" Arming Key **[10]**

Fast arming is enabled at address **208** (key **[7]** "on"). If activated, when the ready light is on, pressing key **[10]** for 2 seconds automatically arms the system. There's no need to enter an access code. This feature can be used to permit selected individuals (i.e. maintenance workers, repair personnel) to full arm the system when leaving the protected area. (When partitioning is enabled, key **[10]** arms system "A" and "B".)

Fast "Stay" Arming key **[11]**

Fast "stay" arming is enabled at address **208** (key **[8]** "on"). When activated, no **"ready"** light is required, however "stay" zones must be closed to arm the system. Pressing **[STAY]** (key **[11])** for 2 seconds automatically "stay" arms the system. (See "stay" arming features.)

Double "Stay" Arming

During the “stay” arming exit delay, pressing **[STAY]** (key **[11]**) again will switch any delay 1 or delay 2 zones to instant zones. (24 hour "stay" zones, follow "stay" zones, and instant "stay" zones are not affected.) Full system arming cancels "double stay" arming.

Fast Exit

Exit while the system is armed in "stay" mode (key **[11/STAY]** flashes - 738 only, “ready” light flashes on both the 728 and 738):

A: Fast exit and Stay key **[11]**

To exit the premises and remain "stay armed": press key **[11/STAY]** for two seconds. The system switches to "exit delay" mode (**"ready"** LED flashes). At the end of the "exit delay" period, the system will return to "stay" arming mode.

B: Fast exit and Regular Arm key **[10]**

To exit the premises and "regular" arm: press key **[10]** for two seconds. The system switches to "regular" arming (key **[11]** and **[12]** flash - 738 only) with "exit delay" (**"ready"** LED flashes). At the end of the "exit delay" period, the system is "regular" armed.

System Disarming

The protected area should be entered through a designated entry/exit door. The keypad sounder will beep to remind user to disarm the system. A valid access code should be entered on the keypad, before the allotted entry time expires. If the access code is entered incorrectly, press **[CLEAR]** and re-enter it. The **"armed"** light will extinguish and the sounder will change to the **"CONF"** beep (series of short beeps) before silencing.

Alarm Memory

The memory light **[MEM]** on your keypad will illuminate if any alarm situations took place while your system was armed. A record of all alarm situations that occurred is stored in memory. After disarming the system, pressing once on the **[MEM]** key causes it to flash and brings up, in the keypad display, the alarm events that occurred during the last alarm period. (Alarm events consist of all zones that generated alarms.)

SYSTEM PARTITIONING

By activating the panel's "partitioning" feature, zones can be divided into two distinct systems, with a shared fire zone (zone #3). Both systems are controlled by one panel, making partitioning a particularly useful feature in installations where shared security systems are more practical (i.e. office/warehouse, apartment/condo complexes).

Partitioning

Partition "on" *(Address **206**, key **[8]** "on")*

Addresses **240** and **242:**

Zones can be assigned to system “A” (address **240**, zone key “ON”) and/or to system “B” (address **242**, zone key “ON”). A “common zone” is a zone that is not assigned to any system (it will be reported as a “System A” zone). It is armed only when both systems are armed, and disarmed if system “A” or system “B” is disarmed. A “dual zone” is a zone that is assigned to both systems (it will be reported as a “System B” zone). It is armed if either system “A” or system “B” is armed, and disarmed only when both systems are disarmed.

Note: When partitioning is not activated (address 206, key [8] "off") any zones selected at address 240 will be armed upon "stay" arming.

Keypad display:

Both systems are displayed on the keypad at the same time. In partitioning mode, when System "A" is armed, the **[STAY]** key flashes on the 738, and is constantly illuminated in the 728. If System "B" is armed, the **[AWAY]** key flashes on the 738, and is constantly illuminated in the 728. If both systems are armed, both of these keys will flash on the 738, and are constantly illuminated in the 728.

Arming/Disarming

Code definition: ***Partition "on"*** *(Address **206**, key **[8]** "on")*
Address **200**: Designates access codes that arm System "A" zones.
Address **202**: Designates access codes that arm System "B" zones.
Address **204**: Designates access codes that can "bypass" zones

CODE PRIORITY

KEY SELECT:	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[BYP]	[MEM]	[TRBL]	[2ND]
200: SYSTEM "A" / STAY	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐	10 ☐	11 ☐	12 ☐	13 ☐	14 ☐	15 ☐	16 ☐
202: SYSTEM "B" / AWAY	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐	10 ☐	11 ☐	12 ☐	13 ☐	14 ☐	15 ☐	16 ☐
204: Codes with bypass access	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐	10 ☐	11 ☐	12 ☐	13 ☐	14 ☐	15 ☐	16 ☐

When a code is activated at both addresses (**200** and **202**), it can do the following:

- The code can fully arm the system. If the code is entered when systems "A" and "B" are disarmed, it will completely arm the system.
- The code can fully disarm the system. If the code is entered when system "A" and "B" zones are armed, it will completely disarm the system.
- When the system is partially armed (i.e. only System "A" or "B" is armed) entering this code will arm the other system.
- The code can be used to selectively arm/disarm System "A" or System "B" zones.
  Enter **[11]** + code to arm/disarm System "A" zones.
  Enter **[12]** + code to arm/disarm System "B" zones.

Note: Codes that are not selected at either address are disabled.

The master code can always access both systems and bypass zones.

- **System "A"** codes can stop sirens coming from **System "B"** zones (and vice versa), but will not disarm the other system.
- It is not possible to arm one system during the other system's **exit** delay.

Note: When partitioning is not activated, (address **206,** key **[8]** "off"):
Address **200** determines which access codes can activate "stay" arming.
Address **202** determines which access codes can activate "away" arming.
Address **204** determines which access codes can "bypass" zones.

Keyswitch/push-button arming/disarming (PS1)

In parallel to keypads, a keyswitch or push button can be used to arm/disarm the system. (The ***Esprit*** PS1 can be installed in bedrooms or any other desired location.) Keyswitch/push button operation is enabled/disabled at address **206**, key **[3]**. Keyswitch can activate "regular" or "stay" arming, based on the definition assigned at address **206**, key **[2]**. (key **[2]** "off" = "regular" arming, key **[2]** "on" = "stay" arming) If "stay" arming is activated, the keyswitch/push button (PS1) cannot be used to disarm the system if it is in entry delay or if an alarm has been generated. In this case, the system can only be disarmed from a keypad. (When partitioning is activated, the keyswitch can be used to arm/disarm System "A" regardless of System "B" status. Pressing key **[11]** will arm System "A".) Pressing two keys on the PS1 simultaneously for 2 seconds will generate a "panic 1" alarm. (See "Keypad (Panic) Alarms", pg. 27).

ZONE BYPASSING

Bypassed zones will not generate an alarm. Manual bypass arming is employed when a system user chooses not to arm the entire protected area. Only zones that have been defined as "bypass enabled" (address **236**) can be selected by the user (address **204**) during manual bypass arming. To bypass zones, enter **[BYP]** + a valid access code. **[BYP]** key will illuminate. When a zone light is on, it indicates that the zone has been bypassed. Pressing **[CLEAR]** erases all bypass entries and currently bypassed zones and exits the bypass mode. Zones to be bypassed should then be re-entered. If bypass information is correct, press **[ENTER]** to end and save bypass functions being programmed. **[BYP]** key will remain illuminated, indicating that some zones have been bypassed. To cancel the zone bypass "status" just entered, press **[BYP]** + a valid access code + **[CLEAR]**. Zone bypasses are automatically cancelled every time the system is disarmed, except in "24 hour" zones. If a "24 hour" zone is bypassed and the system is subsequently disarmed, the "24 hour" zone will remain bypassed.

Note: When partitioning is used, zones assigned to the other system cannot be bypassed if that system is armed.

Bypass Recall

This feature permits system users to reinstate the latest zone bypass instructions saved in memory. By pressing **[BYP]** while in bypass programming mode, previous bypass status is re-established. Even if a user is in the process of entering new bypass information on keypad, one touch of the **[BYP]** key overrides new information and reinstates the preceding zone bypass instructions saved. (The fire zone cannot be bypassed.)

CHIME ZONES

Chime zones report a presence (movement or door opening) in selected zones by emitting a distinctive, rapid intermittent beep. Each keypad is independently "chime" programmed and must be reprogrammed in the event of total power loss. To enable a zone's chime feature, press the desired zone key from **[1]** to **[6]** until a rapid intermittent beep is heard. To enable the chime feature of the keypad zone connected to the particular keypad, use key **[8]**. To disable a zone's chime feature, press on the appropriate key until a steady beep is heard. To disable keypad sounder (mute), press key **[9]**.

KEYPAD (PANIC) ALARMS

The 728 and 738 provide three keypad “panic” zones. Keys must be pressed simultaneously for 2 seconds in order to activate. (Pressing 2 keys on the PS1 for 2 seconds generates a "panic 1" alarm.)

Alarm	**Press keys**	**Alarm Code** Address	**Silent/Audible** Address	**Silent/Fire** Address
Panic 1	**[1]** & **[3]**	**184** (SECTION 31)	**208**, Key **[4]**	
Panic 2	**[4]** & **[6]**	**185** (SECTION 31)	**208**, Key **[5]**	
Panic 3	**[7]** & **[9]**	**186** (SECTION 31)		**208**, Key **[6]**

TROUBLE DISPLAY/MONITORING

Trouble status is continuously monitored by the panel. It can recognize and display 10 different trouble conditions on the keypad or in ***Espload***, and report 8 to the central station. (To send "trouble status reports" to the central, 2-digit trouble report codes should be programmed.)

When trouble conditions occur, the **[TRBL]** key illuminates and if "trouble warning" is enabled (address **210,** key **[9]** “on”) the keypad will beep intermittently. Press **[TRBL]** to switch keypad to "trouble display" mode. **[TRBL]** key flashes. Keys that are "on" indicate current trouble conditions. Press any key to return keypad to normal display.

Key [1] *No battery/low battery*

Panel battery is disconnected, or capacity is low. Panel conducts dynamic battery test under load every minute for a 4 sec. period. Key **[1]** "on" indicates battery is disconnected, or battery should be replaced because it won't provide adequate back-up current in event of AC loss. Trouble indicator **[1] also** comes "on" if battery voltage drops to 10.5 volts while panel is running on battery power (with no AC).

Key [2] *Power failure*

Activates when inadequate AC power goes to panel **OR** the power supply is unable to charge battery **OR** the power supply voltage exceeds 14.9V. Report can also be sent to central, and "power failure" report delay time is programmable at address **252**. Delay duration can be from 001 - 255 minutes (factory default = 30 min). To remove "power failure" from trouble display, key **[2ND]** should be "on" at address **210**. **When a "power supply failure" trouble occurs, the [TRBL] key flashes rapidly.**

Key [4] *Bell disconnect*

Bell is not connected to bell output. Note: When connecting bell to optional relay output, trouble indicator **[4]** is "on" constantly. To avoid this, connect a 1KΩ EOL resistor on bell output. If an internal siren is connected to bell output, and an external siren to relay, the panel will only recognize the existence of the internal siren.

Key [5] *Maximum bell current*

The bell output is microprocessor-controlled and will automatically shut down if current exceeds 3 amps upon an alarm. After opening the short or reducing the load, bell shutdown will end as soon as another alarm is triggered.

Key [6] *Maximum auxiliary current*

Processor has recognized that auxiliary output current exceeds 1A. This causes automatic shutdown of auxiliary output. After opening the short or reducing the load, power will be automatically restored to the auxiliary output after battery test has been conducted (within 60 seconds).

Key [7] *Communicator report failure*

The control panel has unsuccessfully attempted to initiate communication with the central. Report failure is stored in "event list" memory.

Key [8] *Timer loss*

After total battery/AC power failure, the timer must be reprogrammed.
Press **[ENTER]** + installer/master/user 1 code + **[MEM].** Key **[MEM]** flashes. Enter two digits (00 to 23) for hours + 2 digits (00 to 59) for minutes. Press **[ENTER]** or **[CLEAR]** to exit.

Key [9] *Tamper/zone wiring failure*

A zone line cut/line short has occurred. Tamper/wiring recognition must be activated at address **208** if this feature is required. EOL resistors must also be used for zone connection.

Key [10] *Telephone line monitor*

Telephone line cannot be found for 30 seconds. "Telephone line monitor" is enabled at address **206.** This trouble condition can also trigger an alarm if the system is armed. It will also be stored in "event list". Restoration of telephone line can be reported by programming address **183.**

Key [11] *Fire trouble*

The zone wire has been cut on zone 3 (when its zone definition is "24 hour fire"). Fire zone key **[3]** also flashes. If programmed at address **174**, it will be reported to the central.

PROGRAMMING MASTER AND USER CODES *(factory default master **474747**)*

[ENTER] + Master/user 1 code.
Enter 2 digit code number + new code (4 or 6 digits from 0 to 9) + **[ENTER]**.
Press **[2ND]** to erase a code.

Master code = 00 (**[10][10]**) Full access to all system functions.
User codes = 01-16
*(01 - can modify access codes. All user code priorities can be programmed at addresses **200**, **202**, **204,** using the installer code.)*
Note: **[2ND]** key flashes if location is empty (no code programmed).

KEY ACCESS PROGRAMMING

Programs features quickly, without entering addresses or section numbers.

To activate “key access programming”, press **[ENTER],** followed by installer, master or user code 1. (Code required depends on the feature you wish to access - see below.) Then press the key corresponding to the desired feature. Press **[ENTER]** or **[CLEAR]** to exit.

key

[9] **"Auto arming" time program** *(accessible to master and user 1 only)*
Key **[9]** flashes. Enter two digits (00 to 23) for hours + 2 digits (00 to 59) for minutes.

[MEM] **"Panel time" and clear "trouble 8"** *(all 3 codes)*
Key **[MEM]** flashes. Enter two digits (00 to 23) for hours + 2 digits (00 to 59) for minutes.

[BYP] **Test report** *(all 3 codes)*
Reporting is enabled at address **206** keys **[11]**, **[12]**. A value must be entered at address **175**, and both telephone and account numbers must be programmed.

[TRBL] **Call Esplod via telephone** *(all 3 codes)*
Panel identifier, PC password (addresses **001**-**004**) and computer telephone number (addresses **060**-**067**) must be programmed.

[AWAY] **Answer Esplod** *(all 3 codes)*
This feature is available when using the ADP-1 adapter. In Esplod, "blind dial" must be activated in "modem setup" section, and panel phone number must be programmed (works also without ADP-1).

[STAY] **Cancel communication attempts** *(master code and user 1 can only stop calls from/to Esplod)*
Until next reportable event *(installer code - all communications)*

[2], **[6]** **Installer test mode** *(installer code only)*
In installer test mode, a confirmation beep (intermittent) indicates test is "on", a "rejection" beep (long) indicates test is "off". The bell will squawk during walk testing to indicate opened, functional zones.

[2], **[9]** **“Auto arming” time program** *(installer code only)*
(Same as key **[9]** above)

When communicating with Esplod, it is impossible to enter programming mode.

WARRANTY

Warranty conditions for the ***ESPRIT*** may vary from country to country. Please consult your local dealer for complete warranty information. In all cases, the warranty does not cover malfunctions arising from installer error or failure to follow installation/operation instructions, nor does it apply to damages due to causes beyond the control of Paradox Security Systems, such as lightning, excessive voltage, mechanical shock or water damage.

LIABILITY

Under no circumstances shall Paradox Security Systems be held liable for any direct or indirect damages, loss of anticipated profits, loss of time, or any other losses incurred by the buyer in connection with the purchase, installation, operation or failure of this product.

WARNING

This security system should undergo frequent testing. However, despite regular testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this product to fail to perform as expected.

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PROGRAMMING INFO

BENCH TEST *(Refer to Connection (Wiring) Diagram.)*

1. To set zones in non-alarm state (keypad zone lights off), install 1K OHM resistors across zone terminals.

2. Connect keypad. Install 1K OHM resistor across keypad zone.

3. Connect sounder or install 1K OHM resistor across "BELL" terminal.

4. Connect AC. Connect battery.

5. **[TRBL]** key illuminates, due to timer loss. Push **[TRBL]** to view trouble conditions.

6. All keypad lights except **[TRBL]** should be off and keypad should respond to Master code arming and disarming.

7. Master Code: *default 474747.*

8. Keypad Programming.

HEXA PROGRAMMING

(Used to program "Access to Upload/Download" and "Installer Code")
All digits from 0 to F are valid. (See Interpreting Hexa Values)

*Programming values are programmed into memory locations from address **000** to **007**.*

*1) Press **[ENTER]** + installer code.*
*2) Key **[ENTER]** will flash (programming mode).*
3) Enter 3 digit memory address.
4) Enter 2 digit data (See Hexa Display to read value*).*
*5) To erase, press **[CLEAR].** To save press **[ENTER].***
6) Go to step 3 for next address.

*To exit programming mode press **[CLEAR].***

STREAMLINED PROGRAMMING

(Used to program sections 00 to 34)

*1) Press **[ENTER]** + installer code.*
*2) Key **[ENTER]** and **[2ND]** will flash.*
3) Enter 2 digit section number (00-34).
4) Enter 8 digit to program the section.
5) Keypad will beep verifying the completion. Data is saved and the next section is advanced to automatically.
6) Go to step 4 for next address.
*7) To select a specific section, press **[CLEAR]** or **[ENTER]** and go to step 3.*

*To exit programming mode press **[CLEAR].***

FEATURE SELECT PROGRAMMING

*Feature selection programming addresses **200** to **242**. The "ON"/"OFF" status of the lights (keys) determines features selected.*

*1) Press **[ENTER]** + installer code.*
*2) Key **[ENTER]** will flash.*
*3) Enter 3 digit memory address (**200** to **242**).*
4) Press corresponding key to select option.
5) To change selection press key again.
*6) To save press **[ENTER]**.*
*7) Repeat steps 3 to 5 for addresses **200** to **242**.*

*To exit programming mode press **[CLEAR]**.*

DECIMAL PROGRAMMING

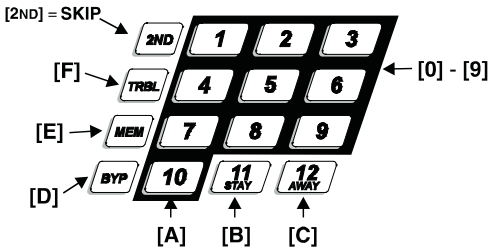
*Decimal value programming addresses **244** to **255**. Values entered must contain 3 digits.*

*1) Press **[ENTER]** + installer code.*
*2) Key **[ENTER]** will flash.*
*3) Enter 3 digit address (**244** to **255**).*
4) Enter 3 digit DECIMAL value (See Decimal Display to read value*).*
*5) To erase, press **[CLEAR].** To save press **[ENTER].***
6) Go to step 3 for next address.

*To exit programming mode press **[CLEAR].***

INTERPRETING HEXA VALUES

KEY	HEXA VALUE	DECIMAL VALUE
[1] - [9]	1 - 9	1 - 9
[10]	A	0
[11]	B	11
[12]	C	12
[BYP]	D	13
[MEM]	E	14
[TRBL]	F	15
[2ND]	skip, null, not programmed	



HEXA DISPLAY

If key is lit = 8 = 4 = 2 = 1

If key is lit = 8 = 4 = 2 = 1

No light = 0 = **SKIP** (empty)

Value of 2ND digit = **A** (**8** + **2** = **A**)

Value of 1ST digit = **3** (**2** + **1** = **3**)

VALUE = "**3A**"

DECIMAL DISPLAY

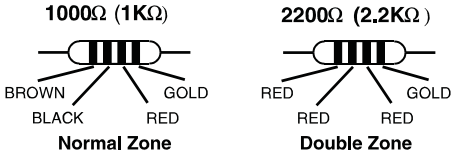
If key is lit = 8 = 4 = 2 = 1

If key is lit = 128 = 64 = 32 = 16

Total value (**57**) (**8** + **1** + **32** + **16 = 57**)

No light = **0**

RESISTOR GUIDE



MASTER AND USER CODES

*(default master **474747**)*
***[ENTER]** + master code + code number (2 digits, 00 to 16) + new code (4 or 6 digits, 0 to 9) +**[ENTER]**. Use **[2ND]** to erase a code.*

***Master code = 00** **([10][10])** Full access to all system functions.*

***User codes = 01-16** (01-can modify access codes. All user code priorities can be programmed at addresses **200**, **202**, **204** with the installer code.)*

*Note: **[2ND]** key flashes if location is empty.*
*To erase a code: **[ENTER]** + Master + Code Number + **[2ND]** + **[ENTER]***

CONTACT I.D. FORMAT

Address 194 (section 33, key [9], [10])

If **CONTACT I.D. (ALL CODES)** is selected, (address **194**, key **[10]**), all addresses from **088** to **193,** programmed or not, will report Contact **I.**D. event codes**.** Programming is not required for these addresses when **ONLY** this format is used**.**

If **CONTACT I.D. (SELECTED CODES)** is chosen, (address **194**, key **[9]**), all addresses from **088** to **193,** programmed with ANY VALUE except **[2ND] [2ND],** will report Contact **I.**D. event report codes**.**

(Potential application: Reporting Contact I.D. format to one central station number, and 4/2 format to another. Use 4/2 format to program addresses. At address 194, select 4/2 format for one telephone number, and Contact I.D. format for the second. Software will automatically convert 4/2 codes to Contact I.D. codes when transmitting to the second receiver.)

TROUBLE DISPLAY

Key **"ON"** =

[1] No battery/low voltage	**[7]** Communicator report failure
[2] Power failure*	**[8]** Timer loss**
[4] Bell disconnect	**[9]** Tamper or zone wiring failure
[5] Maximum bell current	**[10]** Telephone line failure
[6] Max auxiliary current	**[11]** Fire loop trouble

*When a "power supply failure" trouble occurs, the **[TRBL]** key flashes rapidly.

To clear timer loss trouble, see *Key Access Programming* **[MEM] in Programming Guide. Press **[CLEAR]** to clear troubles.

FCC WARNINGS

IMPORTANT INFORMATION

This equipment complies with Part 68 of the FCC rules. Inside the cover of this equipment is a label that contains, among other information, the FCC registration number of this equipment.

NOTIFICATION TO TELEPHONE COMPANY

Upon request, customer shall notify telephone company of particular line to which the connection will be made, and provide the FCC registration number and the ringer equivalence of the protective circuit.

FCC REGISTRATION NUMBER:	**5A7CAN-22633 - AL - E**
RINGER EQUIVALENCE NUMBER:	**0.0B**
USOC JACK:	**RJ31X (USA), CA31A (CANADA)**

TELEPHONE CONNECTION REQUIREMENTS

Except for telephone company-provided ringers, all connections to the telephone network shall be made through standard plugs and telephone company-provided jacks, or equivalent, in such a manner as to allow for easy, immediate disconnection of terminal equipment. Standard jacks shall be so arranged that, if plug connected thereto is withdrawn, no interference to operation of equipment at customer's premises which remains connected to telephone network shall occur by reason of such withdrawal.

INCIDENCE OF HARM

Should terminal equipment/protective circuitry cause harm to telephone network, telephone company shall, where practicable, notify customer that temporary disconnection of service may be required; however, where prior notice is not practicable, the telephone company may temporarily discontinue service if action is deemed reasonable in circumstances. In case of temporary discontinuance, telephone company shall promptly notify customer and will be given opportunity to correct the situation.

CHANGES IN TELEPHONE COMPANY EQUIPMENT OR FACILITIES

The telephone company may make changes in its communication facilities, equipment operations or procedures, where such actions are reasonably required and proper in its business. Should any such changes render customer's terminal equipment incompatible with the telephone company facilities, the customer shall be given adequate notice to effect the modifications to maintain uninterrupted service.

GENERAL

This equipment shall not be used on coin telephone lines. Connection to party line service is subject to state tariffs.

RINGER EQUIVALENCE NUMBER (REN)

The **REN** is useful to determine the quantity of devices that you may connect to your telephone line and still have all of those devices ring when your telephone number is called. In most, but not all areas, sum of the REN's of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices that you may connect to your line, you may want to contact your local telephone company.

EQUIPMENT MAINTENANCE FACILITY

If you experience trouble with this telephone equipment, please contact facility indicated below for information on obtaining service or repairs. The telephone company may ask that you disconnect this equipment from network until problem is corrected or until you are sure that the equipment is not malfunctioning.

U.S. POINT OF CONTACT:

Paradox U.S.
1717 Minnesota Avenue
Winter Park, Florida
32789 USA 1-800-786-9321

FCC PART 15, WARNINGS **INFORMATION TO USER**

This equipment has been tested and found to comply with the limits for Class B digital devices, pursuant to Part 15 of FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to equipment intermittently, the user is encouraged to try to correct the interference by one or more of the following measures: (1) reorient or relocate the receiving antenna; (2) increase the separation between the equipment and receiver; (3) connect the equipment to an outlet on a circuit other than the one to which the receiver is connected, or (4) consult the dealer or an experienced radio/tv technician for assistance.

CAUTION:

Changes or modifications not expressly approved by PARADOX SECURITY SYSTEMS could void the user's authority to operate the equipment.

The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

CAUTION: Users should not attempt to make such connections themselves, but should contact the appropriate electrical inspection authority, or electrician, as appropriate.

The Load Number (LN) assigned to each terminal device denotes the percentage of the total load to be connected to a telephone loop which is used by the device, to prevent overloading. The termination on a loop may consist of any combination of devices subject only to the requirement that the total of the Load Numbers of all of the devices does not exceed 100. The Load Number of this unit is **7**.

Industry Canada certification is only applicable to installation of devices which include transformers approved by the Canadian Standards Association (CSA).

RESTRICTIONS CONCERNANT LE RACCORDEMENT DE MATÉRIEL

L'étiquette d'Industrie Canada identifie le matériel homologué. Cette étiquette certifie que le matériel est conforme à certaines normes de protection, d'exploitation et de sécurité des réseaux de télécommunications. Le Ministère n'assure toutefois pas que le matériel fonctionnera à la satisfaction de l'utilisateur.

Avant d'installer ce matériel, l'utilisateur doit s'assuré qu'il est permis de le raccorder aux installations de l'entreprise locale de télécommunication. Le matériel doit également être installé en suivant une méthode acceptée de raccordement. L'abonné ne doit pas oublier qu'il est possible que la conformité aux conditions énoncées ci-dessus n'empêchent pas la dégradation du service dans certaines situations.

Les réparations de matériel homologué doivent être effectuées par un centre d'entretien canadien autorisé désigné par le fournisseur. La compagnie de télécommunications peut demander à l'utilisateur de débrancher un appareil à la suite de réparations ou de modifications effectués par l'utilisateur ou à cause d'un mauvais fonctionnement.

Pour sa propre protection, l'utilisateur doit s'assurer que tous les fils de mise à la terre de la source d'energie électrique, des lignes téléphoniques et des canalisations d'eau métalliques, s'il y en a, sont raccordés ensemble. Cette précaution est particulièrement importante dans les régions rurales.

AVERTISSEMENT: L'utilisateur ne doit pas tenter de faire ces raccordements lui-même; il doit avoit recours à une service d'inspection des installations électriques, ou à un électricien, selon le cas.

"L'indice de charge (IC) assigné à chaque dispositif indique, pour éviter toute surcharge, le pourcentage de la charge totale qui peut être raccordée à un circuit téléphonique bouclé utilisé par ce dispositif. La terminaison du circuit bouclé peut être constituée de n'importe quelle combinaison de dispositifs, pourvu que la somme des indices de charge de l'ensemble des dispositifs ne dépasse pas 100." L'indice de charge de ce produit est **7**.

La certification d'Industrie Canada s'applique seulement aux installations d'appareils utilisant un transformateur approuvé par l'Association Canadienne de Normalisation (CSA).

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